

MAMMALS OF THE BLANDOWSKI EXPEDITION TO NORTH-WESTERN VICTORIA, 1856-57

By N. A. WAKEFIELD

Department of Zoology & Comparative Physiology, Monash University

Abstract

Historical details are given of the Blandowski expedition to the Murray-Darling area in 1856-7 and of the eventual loss of most of the collections. Data are given of mammals noted by Gerard Krefft in an unpublished diary of the early part of the expedition. Krefft's authorship of the expedition's specimen catalogue is established, and a table is given of dates and locality data applying to series of specimen numbers in it. It is noted that Blandowski returned to Melbourne after 8 months but that Krefft remained and continued collecting for a further 4 months at the expedition's base camp, 'Mondellimin', about where Mildura is now. Three further documents by Krefft are discussed: an unpublished annotated list of Blandowski specimens placed in the National Museum of Victoria, a paper on the vertebrates of the Murray-Darling area, and a catalogue of mammals in the Australian Museum, Sydney. Details are given of the registration at the National Museum of about 140 of the Blandowski specimens of mammals. The main part of the paper follows, comprising distributional data and details of extant Blandowski specimens of approximately 38 species of mammals noted during the expedition. A summary is thus presented of the mammalian fauna of the Murray-Darling junction area in 1857. It is noted that certain mammals were found in northern Victoria and certain others only in New South Wales. The identity of *Mus subrufus* Krefft is discussed.

Introduction

The Blandowski expedition of 1856-57 was under instruction from the Victorian Government to proceed to the junction of the Darling and Murray Rivers, to investigate natural history and collect specimens for the National Museum.

Although the duration of the expedition was 12 months, Blandowski himself took part in only the first 8 months, and even during this period he went by himself on long excursions into South Australia and New South Wales. He appears to have taken little part in the collecting of specimens and the recording of data about them. On the other hand, Gerard Krefft worked consistently for the whole time at the preservation and cataloguing of specimens. Furthermore, he subsequently compiled several documents which provide a considerable body of data on aspects of the expedition's findings.

Due to apparently irrational behaviour on the part of Blandowski, the ultimate value of the expedition was almost nullified. Pescott (1954), in documenting the history of the expedition, has provided the following story of the fate of the collections:

Blandowski transferred the specimens and drawings which had been made on the expedition to his private lodgings, claiming them as his own property. He presented his acquaintances with numbers of specimens, but some of these were eventually returned to the Museum.

On 24 December 1857 Blandowski did deliver some specimens to the museum at the University but without any key to numbers attached to them. Pescott notes that Wietman, a member of the expedition in its early stages,

'made the more serious charge that Blandowski had changed the numbers on some of the specimens and retained the notes explaining the alterations'.

Blandowski sailed from Melbourne in March 1859, apparently taking the bulk of the collection with him. Krefft eventually reported the arrival in Hamburg of '6 large boxes full of specimens of natural history' which, Blandowski stated, contained 'all the rare specimens of the Murray expedition'.

Of the many thousands of specimens which the expedition collected, several hundred were of mammals, representing over 30 species. For more than half of these species the Blandowski expedition has provided all or almost all record of their respective occurrences in or near Victoria. The Blandowski specimens now located in the mammal section of the National Museum of Victoria number about 140 and represent some 22 species. Although in almost all cases proper data are not recorded, this material constitutes a most valuable collection, particularly as it represents a faunal assemblage that is nowhere extant today.

In the absence of readily accessible data, almost all the National Museum specimens of Blandowski's mammals have been registered as from 'Junction of Murray and Darling Rivers'. In many cases this has been misleading, for some of them actually originated over 200 miles from that locality, in very different habitats.

The main purpose of the present paper is to summarize data from the Blandowski documents and Krefft's papers, to associate these details with corresponding museum specimens, and thus to define more accurately the original distributions of the respective species. Although minor discrepancies and some contradictions appear, the over-all picture which is now presented constitutes a major contribution from Gerard Krefft to Australian mammalogy.

Blandowski's Report

William Blandowski gave an account of the expedition in a paper read to the Philosophical Society of Victoria in September 1857 (Blandowski 1858). The following details are presented in that paper:

Leaving Melbourne early in December 1856, his party reached Kew's (= Kow) Swamp, between the Murray R. and Mt Hope, on 27 December. On 3 March 1857, he set out towards L. Boga and the junction of the Murrumbidgee and Murray Rivers. Leaving his party there he went on alone and reached the junction of the Darling and Murray on 8 April. The main party 'formed a permanent encampment at a place called by the native Mondellimin, . . . opposite the junction of the Darling and Murray Rivers'.

Blandowski then went on alone, westward along the Murray, and returned to Mondellimin 'after having been absent three weeks and ridden over 600 miles'. He started again (alone) on 27 May in a north-easterly direction and, during an absence of 24 days, reached a point about 300 miles away and traversed in all a distance of 700 miles. Then on 6 August he left the camp in charge of his employees and proceeded via Adelaide to Melbourne, taking with him 16,000 specimens comprising 2,000 numbers.

He made these comments about the mammals:

'Of quadrupeds I have found 26 different species, of which eleven are not marsupial and of which . . . five are entirely new to me. . . . Most of these quadrupeds I have collected in large numbers, and they are entirely the results of the exertions of my friends the Yarree Yarree aborigines . . .'.

Blandowski credited 'all the information and discoveries' to the aborigines, and he stated that the preserving of specimens was done by his 'white labourers'.

Kreff's Diary

In the Mitchell Library, Sydney, there is a manuscript written by Krefft giving an account of the Blandowski expedition to as far as their stay in the L. Boga area. Some details from this are set out by Iredale and Whitley (1932) but these are mainly of historical rather than natural history interest. However, Krefft did include a list of 9 species of mammal with notes on each. In the diary, the animal which he referred to as 'Jerboa kangaroo', '*Bettongia penicillata*' and 'wiry haired bettongia', is in fact *Aepyprymnus rufescens*.

Although this diary covers only the period from December 1856 to March 1857, the latter part (or perhaps all) of it was not written before September 1857. In it Krefft gives details of the breeding of *Antechinus flavipes* which he observed at Mondellimin in late August and September that year. The name *Bettongia penicillata*, misapplied in the diary, is used correctly in the 'List of specimens kept for the Museum', which Krefft compiled soon after he returned to Melbourne from the expedition. Therefore the diary predated this list.

These points indicate that Krefft's diary was written during the last stages of the expedition or very soon after it concluded.

The Blandowski Catalogue

The specimen catalogue of the Blandowski expedition is located in the National Museum of Victoria, and it is almost completely the work of Gerard Krefft. It is endorsed 'William Blandowski, Melbourne, 15th January 1858' in handwriting quite different from that of Krefft. Blandowski's contribution to the catalogue is merely a few short pencilled notes which were rewritten in ink (and often rephrased) by Krefft.

The catalogue records specimens by serial numbers from 1 to 3,000 but with a few of the higher numbers not used. In addition there is a list of spirit specimens numbered from 1 to 389. Over 650 numbers in the main list and about 100 of the spirit collection apply to mammals. Many spirit specimens were pouch young, presumably belonging to adults accounted for in the main list, but there are no cross references. The total number of mammal specimens collected by the expedition was noted by Krefft as 742.

With very few exceptions, technical names of mammals were not used in this catalogue. For mammal specimens collected during the early part of the expedition settlers' vernacular names are given, and for most of those collected after the establishment of the permanent camp at Mondellimin, aboriginal names appear against the specimen numbers. Krefft's spelling of many of the aboriginal names was not consistent, and in several cases two or more different aboriginal names have been used for the one species. But throughout the catalogue there is very little evidence of misidentification of specimens.

Only in a very few cases are precise localities given for specimens, but the numbers are grouped into 20 lists, and for each list a month and a general locality are given. At the beginning of the catalogue these details are tabulated. However, reference to data in the body of the catalogue indicates that data given in the table for lists VI and VII should apply to lists VII and VIII respectively. With these adjustments, the table of data is as follows:

List	I	Numbers	1-200	Dec. '56	On the road to Gunbower.
"	II	"	201-400	Feb. '57	Neighbourhood of Gunbower.
"	III	"	401-500	" "	" " "

"	IV	"	501-530	"	"	"	"	"	"
"	VI	"	531-663	"	"	"	"	"	"
"	VII	"	664-754	Mar. '57	"	"	"	"	"
						Between Kew's Swamps and the Murrumbidgee.			
"	VIII	"	755-1000	Apr.	}	'Mondellimin'.			
"	IX	"	1001-1200	May					
"	X	"	1201-1600	Jun.					
"	XI	"	1601-1815	Jul.					
"	XIV	"	1816-1930	Aug.					
"	XV	"	1931-2100	Sep.					
"	XVI	"	2101-2400	Oct.	}				
"	XX	"	2401-3000	Nov.					

The six list numbers missing from this sequence apply to the spirit collection and, as none of these specimens has been traced, the present paper is not concerned with them.

In the table, Krefft described Mondellimin as '10 miles south from the junction of the Darling and Murray Rivers, on the Victorian side of the Murray'. In the *Illustrated Melbourne News*, 6 February 1858, the camp was illustrated and its location was described as 'about twelve miles by land above the Church of England Missionary Establishment at Yalta, near to which place the waters of the Darling join the Murray'. Despite Krefft's 'south', these details, together with later references to the proximity of the camp to Gol Gol, locate Mondellimin at about where Mildura is now.

Although Pescott (loc. cit.) inferred that the whole of the expedition collection reached Melbourne on 18 August 1857, the consignment then would have been only what Blandowski took with him on leaving Mondellimin in early August. The catalogue indicates that Krefft remained at the expedition headquarters for approximately a further 4 months during which time he accumulated about 1,000 additional numbers. Some of the specimens in List XX are from the NW. bend of the Murray and some from the Botanic Garden, presumably of Adelaide, which indicates that Krefft used the river and sea route back to Melbourne, as Blandowski had done.

Krefft's List of Museum Specimens

Accompanying the Blandowski specimen catalogue is a document in Krefft's handwriting entitled 'List of specimens of natural history kept for the Museum'. In it he listed 29 species, each with a serial number, and in most cases he gave technical, vernacular, and aboriginal names, as well as general locality data. Copious notes were written about most species and these were usually endorsed with the initials 'G.K.'. This establishes Krefft's authorship of them and also identifies his handwriting.

For each species one or more Blandowski catalogue numbers were noted, and sometimes further un-numbered specimens were indicated by dashes. Altogether, 122 specimens were shown in one or other of these ways as having been placed in the Museum. Many of the numbers and dashes are in parenthesis, and there are the notes by Krefft that 'the specimens in parenthesis have been set up' and 'the other numbers are all contained in Drawer A4'. (As well as 'set up', Krefft used the term 'stuffed' to indicate mounted specimens.)

Stuck to the front of one of the mammal registers at the National Museum of Victoria are 7 slips of paper, in Krefft's handwriting, with data duplicated from his

above-mentioned 'List'. Each slip has a series of numbers on it and these apply in general to specimens, not 'set up', which were 'contained in Drawer A4'. One of the slips bears the date '16/3/5-', with the last figure indecipherable.

There is little doubt that Krefft's List applies to the specimens left by Blandowski at the University Museum, without data, on 24 December 1857. If this is the case, it would appear that Krefft compiled the List, on or before 16/3/1858, to offset the lack of data with the specimens concerned. In the List, Krefft did not identify several of the mammal species. In particular he confused *Bettongia* (*Aepyprymnus*) *rufescens* and *Lagorchestes leporides*, applying the name of the former to the latter species. This demonstrates that the List was certainly compiled before September 1862, when Krefft read a paper in which he identified those two species correctly (Krefft 1866).

Krefft 1866

In September 1862, Gerard Krefft read, before the Philosophical Society of New South Wales, a paper on the vertebrates of the lower Murray and Darling, with notes on 'their habits, economy and geographical distribution' (Krefft 1866). Much of the detail in this paper is the same as the notes of Krefft's List. He stated that some of the observations dated back to 1852 but that the greater number were 'results of a nine months' sojourn on the Lower Murray and Darling, . . . encamped in the neighbourhood of Gol Gol' where he was enabled 'with the assistance of Messrs Williams and their devoted natives, to thoroughly investigate the fauna'.

The paper deals with 21 marsupials, 2 monotremes, 5 bats, 5 murids, and the dingo. For almost all the marsupials and murids of the Murray-Darling junction area, aboriginal names are given as well as technical names. Of the marsupials, Krefft wrote: 'I succeeded in procuring every species known to exist in that part of Australia; and in finding also a number . . . which hitherto had been only known to frequent Western and South Australia'. Krefft's assumption of credit for the mammal collections appears to be justified.

Krefft 1864

In a resumé of mammals in the Australian Museum (Krefft 1864), 13 specimens are included which originated from the Blandowski expedition and which are acknowledged as donations from the National Museum of Victoria. For 7 of these, the locality 'Gall Gall Creek' (= Gol Gol Creek) is cited. Presumably this is not an indication of precise point of origin but it refers rather to the general area, partly New South Wales and partly Victoria, about the Mondellimin camp. In this booklet Krefft indicates that certain species occur in northern Victoria, and he omits Victoria from the distribution which he gives for others. Analysis of his unpublished data, in the records of the Blandowski expedition, indicates that this discrimination is not haphazard but that it was based on his experience in the Murray-Darling area in 1857. This point must be recognized when any attempt is made to determine which species of mammal originally occurred in northern Victoria.

B. J. Marlow has reported (pers. comm.) that, except possibly in the case of *Leporillus conditor*, none of the Blandowski specimens listed by Krefft in this booklet can now be found at the Australian Museum.

It is probable that the preparation of the 1864 booklet post-dated the original reading of Krefft's 1866 paper.

Registrations at the National Museum

In the specimen register of the National Museum of Victoria, 43 of the series 21638 to 21784 were mammals from the Blandowski expedition collection. About 20 of these are associated in the Museum register with specimen numbers from the

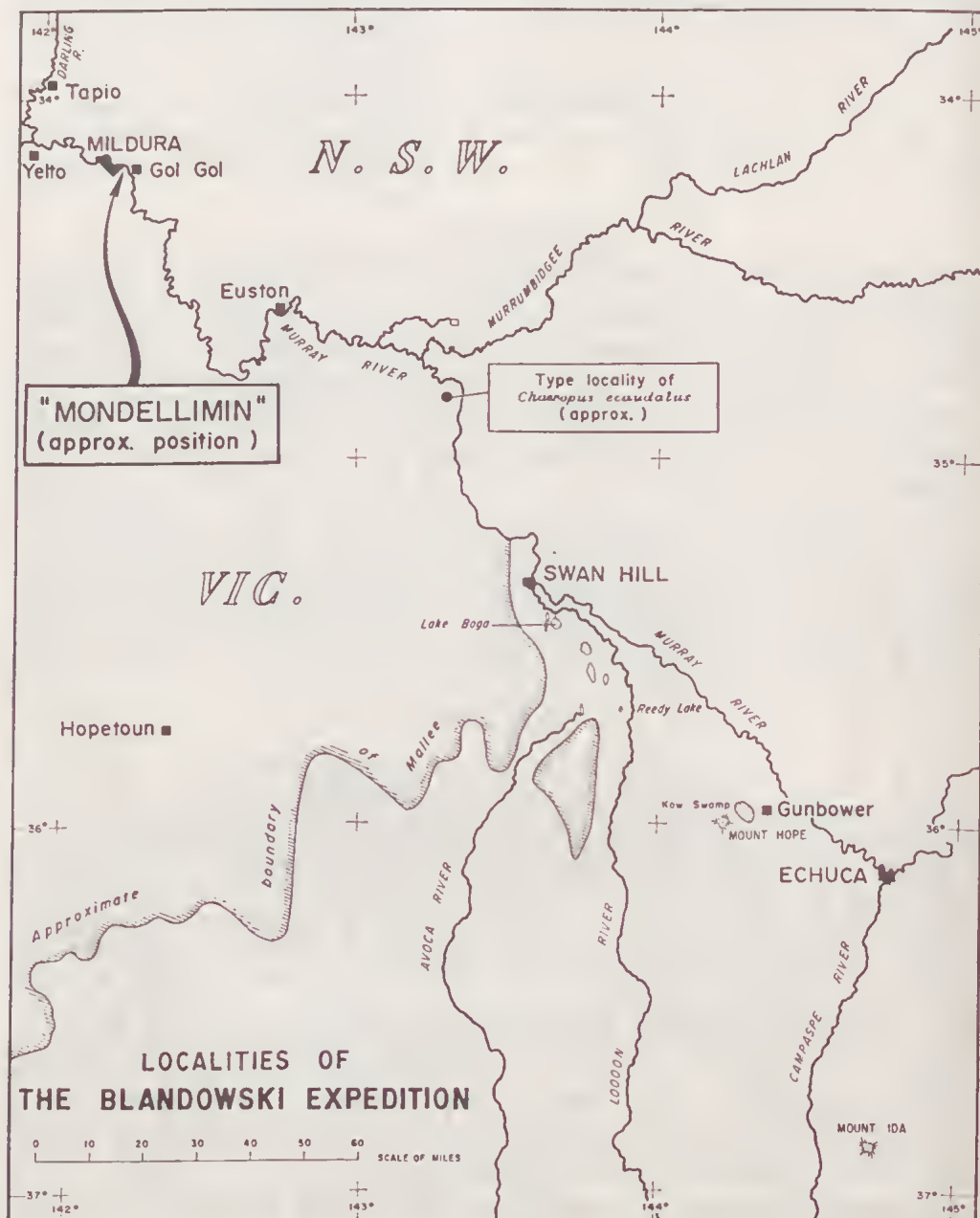


FIG. 1

Blandowski catalogue. Fifteen of these Blandowski catalogue numbers are amongst those noted in Krefft's List. Furthermore, for many species the numbers (i.e. quantity) of specimens entered at that time in the Museum register are exactly or approximately the same as the number (quantity) of 'stuffed' specimens noted for the corresponding species in Krefft's List. These details and other similarities of recorded data indicate that all or almost all those 43 National Museum specimens are from the material noted in Krefft's List.

The specimens concerned were not registered at the Museum until late in 1867. Marlow (1958) was misled by this time lapse and, as a result, he cited 1867 as the date of collection of many Blandowski specimens.

Six Blandowski specimens of *Macropus* had been registered in 1866.

In some cases there are discrepancies between data in the Museum register and details recorded in Krefft's List. This has apparently been due to loss or mixing of field labels during the 10 years that elapsed before registration of specimens.

Further Blandowski specimens were found in the Museum from time to time, with the result that about 12 more were registered there between 1870 and 1920. Those with numbers prefaced 'R' are included in this lot.

During the past 35 years, about 80 more of Blandowski's mammal specimens have been entered in the Museum register. Almost all these are of the Muridae and most of them are still associated with their original catalogue numbers. Brazenor (1936a) documented this material in his main work on the Muridae of Victoria. The registered numbers of specimens of this period are prefaced 'C'.

Summary of Data and Specimens of Mammals of the Blandowski Expedition

In this summary the paragraph headings used for each species have the following significance:

Diary: Krefft's manuscript diary, Melbourne to L. Boga.

Catalogue: The specimen catalogue compiled by Krefft during the Blandowski expedition.

List: Krefft's 'List of specimens kept for the Museum'.

NMV: Registered numbers and other data of specimens in the National Museum of Victoria.

When a Blandowski specimen number is not mentioned in the paragraph headed 'Catalogue' but is discussed in a later paragraph, it must, unless otherwise stated, be taken as having been identified correctly in the Blandowski catalogue (usually by the appropriate aboriginal name). Details such as sex are noted with reference to specimens only when of some significance to the discussion. To avoid confusion with NMV specimen numbers, some Blandowski catalogue numbers are prefixed 'Bl'.

The abbreviations AM and NMV are used for the Australian Museum, Sydney and the National Museum of Victoria respectively.

Fig. 1 illustrates localities mentioned in this summary.

ORNITHORHYNCHIDAE

Ornithorhynchus anatinus

Krefft (1866): 'tributaries of the Murray, . . . Loddon, Avoca, Campaspe, &c.'

Discussion: There is no evidence that any specimen was collected during the Blandowski expedition.

TACHYGLOSSIDAE

Tachyglossus aculeatus

Kreffit (1866): '*Echidna hystrix*. I have seen two preserved skins at Mount Hope. . . the natives further down the river do not appear to be aware of the existence of such an animal as the echidna'.

Kreffit (1864): 'I captured a solitary specimen at Mount Hope'.

Discussion: There is no evidence in the Blandowski catalogue that any specimen was collected.

DASYURIDAE

Antechinus flavipes

Diary: 'Only one specimen procured during our stay, it is a common form on the Murray river . . . number of teats 10, young foetus 9. Breeding season June to September'.

Catalogue: No. 355♂ as 'mouse'; and four other numbers, in list XI, named 'Warum'.

List: '*Antechinus flavipes*. Rusty-footed Phaseogale. Warum. A very common form on the banks of the Murray, it was procured from Eehuea to the Darling junction. A specimen on the 20th of August 1857 . . . had (9) nine foetus attaches to the teats. This specimen is now in the museum at the university'.

No. 355♂, 1613♂, 1673♂, and 1791♀, placed in the NMV.

Kreffit (1866): 'It used to be so common near the camp on the Murray that I have often captured several specimens whenever a load of wood was brought in'.

NMV: No. 21669♂, 21670♀, and 21671 (young), associated in the register with catalogue No. 1791, 355, and 1613 respectively.

Discussion: The different sexes recorded for 355 and NMV No. 21670 indicate mixing of data.

Phascogale tapoatafa

Kreffit (1866): '*Phascogale penicillata*. The only specimen I found was secured in the neighbourhood of Mount Hope'.

Kreffit (1864): 'certainly not known to the aborigines of the Murray and Darling'.

Discussion: No specimen has been traced and there is no reference to the species in the Blandowski documents.

Phascogale calura

Catalogue: 5 specimens in lists X and XI, named 'Kultarr'.

List: '*Phascogale calura*. Handsome tailed Phaseogale. Kultarr. Mondellimin'.

No. 1225 and 1541♂, placed in the NMV.

Kreffit (1866): 'My specimens were captured near Williams' Station, Gol Gol Creek, about 10 miles from the Darling junction'.

Krefft (1864): 'the interior of New South Wales, and northern portions of Victoria'.

NMV: No. 21656♂, 21657♀.

Sminthopsis crassicaudata

Catalogue: 14 numbers, in lists XI, XIV, and XV, named 'Mondellundellun'.

List: '*Podabrus crassicaudatus*. Thick-tailed Podabrus. Mondellundellun. Murray and Darling scrub'.

No. 1681, 1683, 2009, and 2052, placed in the NMV.

Krefft (1864): At the AM—'Adult skin, Gall Gall Creek, Lower Murray, from the NMV'.

NMV: No. 40908, 40909, 40910, 40911, R2292 (= Bl. 2038), R2293.

Sminthopsis murina

Catalogue: 10 numbers, in lists VIII to XI, including 1660, named 'Tram Trammit'. 3 numbers, including 1923 and 2040, named 'Ram Rammit'.

List: '*Antechinus?* Tram Trammit. Murray and Darling scrub'.

No. 1660, 1923, and 2040, placed in the NMV.

Krefft (1866): '*Antechinus albipes*'.

NMV: No. 21667 (= Bl. 2040) and 21668 (= Bl. 1660) were registered in 1867, but neither specimen can now be found.

Antechinomys laniger

Catalogue: No. 1429, named 'Kultarr'.

List: '*Phascogale lanigera*. Mondellimin'.

Krefft refers to two male specimens, the other of which was killed (and presumably eaten) by *Phascogale calura*.

No. 1429, placed in the NMV.

Krefft (1866): 'Two single specimens . . . were obtained through the natives at Gol Gol Creek. The natives informed me that the animal was very rare, . . . had a dispute about its name and called it Kultarr, while some asserted they had never seen the animal before'.

Krefft (1864): 'Plains of the interior of New South Wales, Victoria, and South Australia'.

NMV: No. 21681.

Dasyurinus geoffroyi

Catalogue: 11 numbers, beginning in list X, named 'Ketttrie'.

List: '*Dasyurus geoffroyi*. Geoffroy's Dasyurus. Ketterie . . . along the scrub on the banks of the Murray'.

No. 1378, 1617, 1208, 1883, 2088, 2635-8 (young), placed in the NMV.

Krefft (1866): '*Dasyurus geoffroyi*. Native Cat or Tiger Cat of the settlers. Ketttrie of the natives'.

NMV: No. 21784 (young), registered in 1867, cannot now be found. No. R1328 (re-registered, C6084).

Discussion: No. 6584 and 6585, registered in 1865 as 'Murray', are probably Blandowski specimens.

Myrmecobius fasciatus

Krefft (1866): 'not found close to the (Murray) river and, as far as my enquiries among the natives went, has never occupied that part of the country. I have been informed by . . . the owner of a station at Tapio, about 80 miles from the Darling junction, that the Banded *Myrmecobius* is by no means rare, and that the natives could procure specimens for me, but a few bad skins were all I obtained'.

Discussion: This is the only reference to *Myrmecobius* in connection with the Blandowski expedition, and there is no evidence that any specimen was kept.

Tapio station was situated between Gol Gol and the Darling; the '80 miles' is an error. (See Fig. 1)

PERAMELIDAE

Isodon obesulus

Catalogue: 62 numbers (including 1152, 1269, and 1433) beginning in list VIII, named 'Pirrikin'; and a further 8 (including 1155) are identified as '*Perameles nasuta*'.

List: '*Perameles obesula*. Short-nosed *Perameles*. Pirrikin. Murray Scrub'.

NMV: No. 21683 and 21684 (= Bl. 1433); re-registered, C5793 and C5792, respectively.

No. R2279 (= Bl. 1086), R2280 (= Bl. 1539), and R2281 (= Bl. 2181); re-registered, C5791, C5790, and C5789, respectively.

Perameles bougainville

Catalogue: In list IX, 3 numbers, including 1115, named '*Perameles Gunn's*'; and No. 1153, named 'Banded *Perameles*'. In subsequent lists, 10 numbers (including 1444, 1948, 1949, and 2076), named 'Moncat'.

List: '*Perameles fasciata*. Banded *Perameles*. Moncat. Murray scrub. The natives have two distinct names for this animal . . . Thill . . . Moncat'.

No. 1115, 1153 (adult), 1444, 1948 (young), 1949 (young), and 2076, placed in the NMV.

Krefft (1866): 'common on all parts of the Murray River'.

Krefft (1864): 'Northern district of Victoria and interior of New South Wales'.

NMV: No. 21717, 21718, 21719 (young), and 60221 (= Bl. 2076); re-registered, C5922, C5923, C5884, and C5921, respectively.

Discussion: There has been some confusion of data with NMV No. 21719 and it is now associated in the register with the Blandowski No. 1153.

Macrotis lagotis

Catalogue: 3 numbers, named 'Wuirrapur'.

List: '*Peragalea lagotis*. Large eared Peragalea. Wuirrapur—Murray tribes. Jacko—Darling tribes'.

No. 1706, 1860, and 2643, placed in the NMV.

Krefft (1866): '*Peragalea lagotis*. Rabbit Rat. This beautiful animal . . . has long ago retreated to the north of the Murray'.

Krefft (1864): 'Western Australia, South Australia, and interior of New South Wales'.

NMV: No. 21773, 21774, and 21775; re-registered, C5895, R1774 then C5888, and R1775 then C5885, respectively.

Chaeropus ecaudatus

Catalogue: No. 1899 and 1900 ('forwarded to Melb. Aug. 1857'), 2006 and 2007 (skeletons), 2016♂ and 2928; all named 'Landwang'.

List: '*Chaeropus occidentalis*. Mondellimin . . . Procured first during the month of October (on the 4th) . . . All specimens procured on the N.S.W. side of the Murray'.

No. 1900 and 2006 (as 'skeleton'), 2016, 2858, 2918 (sic), and one without record of number, placed in the NMV.

Krefft (1866): 'During a period of six months I encamped not far from the spot where Sir Thomas Mitchell secured his tail-less animal . . . about eight specimens were secured during our stay'.

Krefft (1864): At the AM—'a. Adult male. Gall Gall Creek. From the NMV'.

'Habitat etc. the plains of South Australia, Western Australia, and New South Wales (Lower Murray district)'.

NMV: No. 21638, 21639, 34018 (re-registered, C5887, C5889, C2900, respectively), and 60219.

Discussion: No. 34018 is a skeleton. In the List '2918' is a mistake for 2928. The first specimens were not obtained on October 4th but in August (see table of data with Krefft's List).

In discussing *Chaeropus*, Troughton (1941) reported that Krefft was 'camped at Mitchell's locality in October 1857'. Krefft was camped at Mondellimin, and his 'not far' amounted to about 80 miles from Mitchell's locality. (See Fig. 1)

PHALANGERIDAE

Petaurus breviceps

Krefft (1866): 'The first *Belideus* I captured on my return, at Mount Ida, McIvor

Range, 80 miles distant from the Murray, is, according to Gould, a new species, and is figured by him in part XI of his Mammalia, 15, as *Belideus notatus*'.

Discussion: Mt Ida (36° 53'S., 144° 92'E.) is 3 miles N. of Heathcote, Victoria, and 50 miles S. from the Murray at Echuca.

Pseudocheirus peregrinus

Catalogue: No. 2711 is 'Ring tailed Opossum'.

Krefft (1866): '*Phalangista viverrina*. A rare animal on the Murray and Darling. I secured no more than two specimens during my whole stay'.

Discussion: No museum specimen was recorded nor can any be traced.

Trichosurus vulpecula

Catalogue: 7 numbers, all in list X, named 'Opossum'.

List: 'Opossum. Mallee scrub. Sometimes 20 miles from water in the Mallee'.

No. 1359, 1360, 1420, 1431, placed in the NMV.

Krefft (1866): '*Phalangista vulpina* . . . at the camp' in 'the large flooded gum trees (*Eucalyptus rostratus*) fringing the river banks'.

Discussion: There is no evidence of any Blandowski specimen of *Trichosurus* having been registered at the NMV.

VOMBATIDAE

Lasiorhinus latifrons

Krefft (1866): 'I know upon reliable authority that *P. latifrons* has been killed in the neighbourhood of the North-west Bend on the Murray'.

Discussion: By inference, Krefft had no evidence of any occurrence of *Lasiorhinus* in the Murray-Darling junction area.

MACROPODIDAE

Bettongia penicillata

Catalogue: 28 numbers, beginning in list VIII, named 'Pattuck'.

List: '*Bettongia penicillata. ogilbyi*. Jerboa Kangaroo. Pattuck'.

Krefft (1864): At the AM—'Adult males. Gall Gall Creek. From the NMV'.

'On the banks of the Murray as far as Euston, to the eastward of that township but few specimens have been observed; and at Gunbower Creek, some 150 miles further east, the aborigines capture *Bettongia rufescens* only, and they have informed me *B. ogilbyi* is not found in their country.'

NMV: 21762, 21763, 21765 (re-registered, C2449, C2452, C2451, respectively), 21764, and 21766.

Bettongia lesueur

Catalogue: 43 numbers, beginning in list IX, named 'Booming'.

List: '*Bettongia grayi*. Booming. I have never met with this *Bettongia* on the Victorian side of the Murray but on the N.S.W. side it is found in abundance'.

No. 1245, 1754♀, 1755, and 1756, placed in the NMV.

Krefft (1866): '*Bettongia graii* . . . has long retreated before the herds of cattle with which the plains bordering the Murray are now stocked; and it is no longer to be found south of that river'.

Krefft (1864): 'Plains of the Murray and Darling; the Murrumbidgee junction being apparently the eastern boundary of this species'.

At the AM—'a & b. Adult male and female. Tapio, Lower Darling. From the NMV'.

NMV: No. 21640, 21641, 21642, 21643 young ♂ (re-registered, C2647, C2648, C2649, C2650, respectively), 21644, R1986 (= Bl. 1192), and C6187 (= Bl. No. 1245).

Discussion: There has been some confusion of data and, in the NMV register, No. 21643 is equated to the Blandowski No. 1754.

Aepyprymnus rufescens

Diary: 'Jerboa kangaroo', identified as '*Bettongia penicillata*'—'a wiry-haired Jerboa only met with at Gunbower and perhaps some 50 or 60 miles down the river'.

Catalogue: 8 numbers, in lists I, II, III, and VI, named 'Kangaroo rat'. These include No. 467 and 470, from 'neighbourhood of Mount Hope'.

List: 'Jerboa kangaroo. Gunbower Creek. This little jerboa was not observed further down the Murray than Reedy Lake'.

No. 651 (later endorsed 'destroyed'), 469, and 3 other specimens with numbers not noted, placed in the NMV.

Krefft (1866): '*Bettongia rufescens* . . . has not been observed by me westward of the Murrumbidgee, where *Bettongia penicillata* appears to take its place. Not a single specimen was procured by the native during my stay at the Darling Junction, so that I have no doubt about the extent of its range'.

NMV: No. 21767 and R2185 (= Bl. 608, Echuca).

Discussion: Marlow (1958) indicated that NMV No. 21767 originated from 'the junction of the Murray and the Darling Rivers' in 1867 'in spite of Krefft's (1866) statement'. It is now clear that No. 21767 originated from the Gunbower area in 1857.

Lagorchestes leporides

Catalogue: 41 numbers, commencing in list VIII, named 'Turratt'.

List: '*Bettongia rufescens*? Rufous hare kangaroo. Turratt'.

No. 1496, 1499, 1575, 1782, 1795, 1796, 1860, and 2699, placed in the NMV.

Krefft (1866): '*Lagorchestes leporides*. Turratt. Common upon the level country between the Murray and Darling'.

Krefft (1864): In the AM—'a & b. Adult males. Lower Darling. From the NMV'.
 'The plains bordering upon the Murray, Murrumbidgee and Darling appear to be the favourite haunt of the species.'

NMV: No. R2252 (= Bl. 1920), R2253 (= Bl. 847), R2254, and R2474 (= Bl. 1579).

Discussion: Krefft has given no indication that he encountered *Lagorchestes* south of the Murray River.

NMV No. 11154, registered as 'Mount Hope. Purchased of Batchelor', may have been a Blandowski expedition specimen.

(The catalogue number 1860 was used also for a specimen of *Macrotis lagotis*.)

Onychogalea fraenata

Diary: 'Bridle nail tailed kangaroo. *Onychogalea fraenata* . . . of very common occurrence, to be met with any part of the Murray scrub'.

Catalogue: 42 numbers, in lists I to VII, named 'Pademelon'.

24 numbers, in lists IX to XVI, named 'Merrin'.

List: '*Onychogalea fraenata*? Pademelon (colonists). Merrin'.

No. 1873, 1899, 1917, 2297, 2329, and three without numbers, placed in the NMV.

Krefft (1866): 'The most common of all smaller species of the kangaroo tribe'.

Krefft (1864): '*Onychogalea fraenata* . . . common in the northern parts of Victoria'.

In the AM—'a. Young male. Gunbower Creek, Lower Murray. From the NMV'.

NMV: No. 21752 and 21753 were registered in 1867 but the latter cannot now be found.

Discussion: In both the Blandowski catalogue and the List, No. 1899 was used also for 'Landwang' (i.e. *Chaeropus ecaudatus*).

Onychogalea lunata

NMV: No. 25070♀, registered in 1868, from 'Junction of Murray and Darling. Blandowski'.

Discussion: No specimen bearing this number was found in the NMV. But there is an old mounted female specimen of *O. lunata* with no data other than a tag labelled '1899'. This is evidently the No. 25070, which had been misidentified by Krefft in his List as a juvenile *O. fraenata*.

In discussing *O. lunata*, Krefft (1864) stated that he had 'taken it west of the Darling'. Presumably he was referring to a Blandowski specimen.

Macropus rufus

Diary: 'The Red Kangaroo (*Osphranter rufus*) is to all appearance very scarce,

as not a single specimen was brought in during our stay at Gunbower by the natives'.

Catalogue: Only 4 numbers—1788, 1903, 1904, and 1980—named 'red kangaroo'.

List: '*Osphranter rufus*. Great Red Kangaroo. Native name ? Although this species is to be found on both banks of the Murray yet all the specimens procured were killed near to the Darling junction'.

No. 1788, 1904, 1980, and two others without numbers specified, placed in the NMV.

Kreffit (1866): '*Osphranter rufus*. Bullucur . . . has become very scarce upon the left bank of the Murray, but is still found in considerable numbers in New South Wales and South Australia. The range of this species to the eastward does not extend much beyond Mount Hope'.

Discussion: No Blandowski specimen of *M. rufus* has been traced in the NMV register or collections.

Kreffit's 'near the Darling Junction' is a New South Wales locality.

Kreffit's belated use of 'Bullucur' for this species is at variance with his earlier lack of a native name for it.

Macropus major

Diary: 'Common Kangaroo or Great Kangaroo . . . is also scarce, all the specimens procured were small'.

Catalogue: No. 353 is named 'Scrub kangaroo' with a note in Blandowski's handwriting, 'not identical with *Macropus major*'.

No. 377, 379, and 1440, named 'Kangaroo'.

No. 1237 and 1457, named 'Bullucur'.

9 numbers, including 1684 and 1902, named 'Mallee Scrub Kangaroo'.

No. 1790 is 'Grey Kangaroo. Mallee scrub on the Darling. V. rare. Sometimes nearly white'.

List: 'Common Scrub Kangaroo. Bullucur. It is very common on both sides of the Murray.

No. 1902, 1237, 1457, and 1684, placed in the NMV.

Kreffit (1866): '*Macropus major*. Bullucur. A much more common species than the preceding'.

NMV: No. 19270, 19271, 19272 (re-registered, R2114), 19273, 19274, and 19275, were registered in 1866. None of these appears to be in existence now.

Discussion: All this Blandowski material, with No. 377, 379, and 1790 as possible exceptions, appears to be the Black-faced or Mallee Kangaroo, *M. major melanops*.

MURIDAE

Hydromys chrysogaster

Diary: 'The golden bellied Beaver Rat exists in the swamps'.

Catalogue: No. 685♂ as 'Hydromis', and No. 743 (young) as 'Beaver Rat'.

List: 'This rat was procured at Lake Boga but it is also found in most of the lagoons and waterpools near the Murray'.

No. 685 and 743, placed in the NMV.

Kreffit (1866): 'All the specimens of this rat procured by me are from Gunbower Creek and Lake Boga, where the animal is very plentiful . . . This rat is not found on the Lower Darling, at least, I was assured by the natives that they had never seen it'.

Kreffit (1864): 'Murray, Darling, Loddon, the Avoca . . . '.

NMV: R12055 and R12056♀ (= Bl. 743) (re-registered, C4868 and C4867, respectively).

Thetomys gouldii

Brazenor (1936a) included these details: '*Pseudomys (Thetomys) gouldi* . . .

Gould's Mouse has not been recorded from Victoria since 1857, when Blandowski secured several specimens. Unfortunately these were crushed, apparently soon after their preparation as skins, and are completely flattened'.

NMV: Only one of the 'several specimens' can be traced in the register. It is No. C955.

Discussion: In the Blandowski catalogue, No. 1439 is named 'Darling Rat', and No. 1443 is named 'White-tailed Darling Mouse'. These appear in list X, which was completed shortly after Blandowski returned from his 700-mile Darling River excursion.

Kreffit's List includes 'Darling Mouse. This mouse was procured by the natives on the Darling. Mr. Bl. brought it from there and I am unable to furnish any information respecting its habits, etc.'.

No. 1443 was noted as having been placed in the NMV as a 'stuffed' specimen.

Kreffit (1866) noted that 'several skins of *Hapalotis* were received through native tribes living some 100 miles further north, but all were in such bad preservation that it was found impossible to give a correct description of them'.

The mounted Blandowski specimen No. 1443 cannot be traced in the NMV register or collections. NMV No. C955 is a study skin, not a mount.

Although the evidence is circumstantial only, it indicates that the NMV specimen C955 was brought back by Blandowski from a considerable distance up the Darling River. Therefore, it should not have been recorded as representing a Victorian species.

Leggadina hermannsburgensis

Catalogue: In list VIII—13 members (766, 790, and 817-827) named 'Lanango', and two (852, 1000) named 'Little Mouse'.

In list IX—No. 1093-5, named 'Kahlpere, little Hapalotis'.

A further 31 numbers (including 1333, 1336, 1399, 1661, 1774, and 1835), in lists X, XI, XIV, and XV, named 'Kunnang'.

List: 'Australian Field Mousc. *Mus novae-hollandiae*—Kunang. Distributed all over the Murray scrub'.

No. 818, 822, 1093, and 1661, placed in the NMV.

NMV: No. 21677 (=Bl. 1093) and 21678 (= Bl. 1661), registered in 1867 as '*Pseudomys novae-hollandiae*'.

No. C984-C1006 (certain of which are the Blandowski numbers 790, 827, 1333, 1399, 1774, and 1835), as '*Pseudomys novae-hollandiae*'.

There are some unregistered scraps bearing tags labelled '821' and '1336'.

Discussion: In his 1866 paper, Krefft omitted the species, evidently inadvertently.

NMV specimen C1001 bears a tag labelled '851' which in the Blandowski catalogue is not a mammal. The specimen bears a second tag inscribed 'Kunumalka, Darling, 9 June'.

Brazenor (1936, 1936a) treated the Blandowski material as '*Pseudomys (Leggadina) novae-hollandiae*'. Troughton (1937) named it *Leggadina hermannsburgensis brazenori*.

'*Mus subrufus*' (cf. *Gyomys desertor*)

Catalogue: In list IX—No. 1037, 1057, 1092; as 'Ramm Ramm Mouse'.

In list X—No. 1334, 1337, 1374, 1392-6, 1398; as 'Pädorka'.

In list XI—No. 1627, 1653, 1682, 1778, 1792, 1798; as 'Ram Ram'.

In lists XIV and XV—1908, 1924, 1925, 1928, 1936; as 'Pädack'. 1845, 1950, 1951; as 'Pethack'.

In list XV—1964, 1965, 1981, 1982, 1989, 1992, 1993, 1997, 2011, 2031; as 'Päsack'. 2032; as 'Kunnang'.

List: 'Dusky Mousc. Pethack. Murray and Darling scrub. This mouse is also procured in large numbers by the blackfellows, who dig them out of the ground'.

No. 1057, 1334, 1395, and 1682, placed in the NMV.

Krefft (1866): '*Mus subrufus*? Dusky Mouse. Pethack. Apparently an undescribed species (for which I would propose the name *Mus subrufus*) is found in large numbers between Gol Gol Creek and the Darling; it is nocturnal and gregarious, and, like *Hapalotis mitchellii*, burrows into the ground; four young are produced at a time by the female'.

NMV: 5 specimens (No. C145-C149) registered as *Pseudomys desertor*. These are associated with Blandowski field tags bearing No. 2032, 1982, 1778, 1398, and 1331, respectively.

Discussion: Iredale and Troughton (1934) included '*Mus subrufus* Krefft' among names 'not yet accurately located'.

Krefft's *Mus subrufus* is the 'Dusky Mouse. Pethack' of his List.

The 4 specimens identified thus in the List were named 'Ramm Ramm'

(No. 1037), 'Ram Ram' (No. 1682), and 'Pädorka' (No. 1334, 1395) by Krefft in the Blandowski catalogue.

'Pädorka', 'Pädack', 'Päsack', and 'Pethack' are evidently different renderings of the one aboriginal name.

NMV No. C145 (= Bl. 2032, 'Kunnang'), C146 (= Bl. 1982, 'Päsack'), C147 (= Bl. 1778, 'Ram Ram'), C148 (= Bl. 1398, 'Pädorka') and C149, are the 5 specimens identified by Brazenor (1936a) as '*Pseudomys* (*Gyomys*) *desertor* Troughton'. C148 is the specimen which Troughton had compared with the type and pronounced 'indistinguishable from the central form'.

In the Blandowski catalogue, No. 1331 is named '*Microca*' (? *Microica*, a flycatcher). This number, on the tag associated with NMV specimen C149, is probably a mistake for 1334 or 1337.

Brazenor (1936a) recorded the Blandowski specimens as Victorian, though the only specific locality given by Krefft is in New South Wales. However, the 'Murray and Darling scrub' of Krefft's List, and the large number of specimens noted in the catalogue, indicate a general distribution which probably extended into Victoria.

Leporillus apicalis

Catalogue: 96 specimens, in lists VIII to XX, named 'Tillikin'; 4 others, including 1116, in list IX, identified as '*Conilurus albipes*'; and No. 2097, as 'White tip'.

List: '*Hapalotis apicalis*. White-tipped Hapalotis. Tillikin. Murray and Darling scrub'.

No. 887, 933, 1116, 1200, and 2097, placed in the NMV.

Krefft (1866): 'White-tipped Hapalotis. I observed the first specimens in the neighbourhood of Euston, and found it in great numbers upon Sir Thomas Mitchell's old track on both sides of the Murray. It also occurs on the Darling'.

Krefft (1964): In the AM—'a, b & c. Adult males. Gall Gall Creek. Lower Murray'.

NMV: No. 21672 (= Bl. 1200), 21673, and 21674 (= Bl. 2097).

No. R1760-R1764 and R1767 (re-registered, C5570-C5574 and C5579, respectively), and R1768.

No. C87-C98 (associated with Blandowski No. 1320, 1261, 1268, 1890, 1298, 1212, 1324, 879, 1217, 1147, 1271, 1227, and 1264, respectively), and C99.

Discussion: In the Blandowski catalogue, No. 879 does not apply to this species.

Leporillus conditor

Catalogue: 7 numbers, in lists XIV and XX, named 'Kohl'.

List: '*Hapalotis conditor*. Building Hapalotis. Kohle or Köhl . . . all the specimens procured by the natives were obtained when I was encamped with them near Mount Lookout, a sandhill about ten miles from the Darling junction'.

Kreffit (1866): 'I found that it had already retrcated . . . across the Murray. Only a few empty nests were occasionally met with south of that river'.

Kreffit (1864): 'I do not think that it occurs south of thc Murray, where according to the aborigines, it was found in large numbers not many years ago'.

In the AM—'a. Adult. Tapio, Lower Darling. From the NMV'.

NMV: No. 21675♂ and 21676♀ are associated in the register with Blandowski No. 2421 and 1851 respectively, but, according to the sexes recorded, these two numbers have been confused.

No. C100 (= Bl. 1995) and C101 (= Bl. 1918).

Notomys mitchellii

Catalogue: 96 numbers, from lists VIII to XX, named 'Kahlpere'.

List: '*Hapalotis mitchellii*. Mitchell's Hapalotis. Kahlpere. In the scrub on the Murray and Darling'.

Of the 4 Blandowski specimens listed here as placed in the NMV, only No. 2660 is named 'Kahlpere' in the catalogue, while the other three (No. 2510, 2200, and 2186) were used for non-mammalian specimens.

Kreffit (1866): 'I was unable to procure specimens at Gunbower Creek, or at the junction of the Loddon. The first pair obtained were brought to me by natives in the neighbourhood of the Murrumbidgee. This animal is very plentiful on the Darling'.

NMV: No. 21679 (= Bl. 1990) and 21680 (= Bl. 2074); C11 to C35; C209 to C211; and R1767 (re-registered, C5579).

Of these, 12 specimens have tags bearing Blandowski catalogue numbers which were named 'Kahlpere'. However, 6 others have tags bearing numbers which, in the catalogue, belong to bird specimens.

Discussion: Although there are minor discrepancies with some other species, this is the only example of major confusion of Blandowski catalogue numbers.

'*Hapalotis*' (= *Notomys mitchellii*?)

Catalogue: No. 1971, 2075, and 2186, named 'Kirrie Mouse'; 1946 and 2077, named 'Muirruitang Mouse'.

List: '*Hapalotis*. On the Murray at Mondellimin. There were only a few specimens of this mouse procured, which is similar to Mitchell's Hapalotis but it wants the brush on the end of its tail. The fur is shorter and somewhat harder to the touch (than) that of *Hapalotis mitchellii*'.

NMV: No. 21686 (= Bl. 2075) and 21687 (= Bl. 2086), registered in 1867.

Discussion: It is probable that this material was *Notomys mitchellii*, the tail tip of which is sometimes stripped of skin and hair.

Neither of the registered specimens can be traced with certainty at the NMV. However, a mounted specimen with no data attached may be one of them; it is *Notomys mitchellii* and lacks the tail tip.

CANIDAE

Canis familiaris dingo

Diary: 'The dingo is not so plentiful as in former years as the strychnine of the settler has killed a great many, and only a very few individuals are to be met with in the most scrubby part of the country or among the rocks at Mount Hope'.

Catalogue: Two numbers, in list XVI, apply to the dingo.

List: '*Canis dingo*'.

No. 2246 and an unnumbered (black) specimen, placed in the NMV.

Krefft (1866): 'He is as plentiful as ever on the Lower Murray and Darling'.

Discussion: No Blandowski specimen is noted in the register nor was any traced at the NMV.

RHINOLOPHIDAE

Rhinolophus megaphyllus

Krefft (1866): '*Rhinolophus megaphyllus*. Large-leaved Horseshoe Bat. Frequently observed near Gunbower Creek'.

Krefft (1864): 'Habitat. New South Wales and the northern district of Victoria'.

Discussion: There is no museum specimen to support these reports nor any mention of the species in the Blandowski documents.

In discussing the distribution of cave bats, Hamilton-Smith (1965) concluded that 'this record should be treated as doubtful'.

VESPERTILIONIDAE

cf. *Nyctophilus geoffroyi*

Catalogue: No. 686 and 1889, named 'Bat'.

List: 'Large eared Bat'.

No. 686 and 1889, placed in the NMV.

Krefft (1866): '*Nyctophilus geoffroyi*. Observed at various places between Gunbower Creek and the junction of the Darling'.

Discussion: No Blandowski specimen has been traced in the register or collections at the NMV.

? Eptesicus pumilus/? Chalinolobus morio

Catalogue No. 1185, named 'Common Bat'.

(There were also two spirit specimens of bats.)

List: 'Bat'.

No. 1185, placed in the NMV.

Krefft (1866): '*Scotophilus pumilus* . . . a single specimen was captured near Mildura, 20 miles from the Darling'.

'*Scotophilus morio* . . . specimens of which have been captured on the lower Darling.'

Discussion: No registration or preserved specimen has been found at the NMV to allow either of Krefft's identifications to be checked.

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